

Forum:[Hack Forums](#)

Thread: [If I TX at the same frequency of the Speakers, will it create interference on sound?](#)

allexj - April 2, 2020, 10:22 am

Obviously I'm talking about transmitting RF signals.

Will something happen or music just comes out from speakers without any difference?

SawCyanic - April 2, 2020, 11:26 am

It will interfere. Understand that wireless communication is electromagnetism and that is the fundamental operation theory of speakers.

webdev77 - April 2, 2020, 2:14 pm

Here's a good experiment for you. Open up Audacity and generate a sinewave on the right channel and a cosine on the left channel. Picking 10kHz or so should work well. Now pick up your speakers and point them directly at one another. You will get destructive interference and hear almost nothing if you can perfectly line them up.

allexj - April 3, 2020, 12:10 am

(Apr 2, 2020 11:26 AM)Enginerd Wrote: [\[CITE\]](#) It will interfere. Understand that wireless communication is electromagnetism and that is the fundamental operation theory of speakers. Have you an idea on how to transmit at that low frequencies? I know I can also use my soundcard and attach an antenna in headphone jack, but there's the antenna problem that need to be like kilometres of length lol, so really don't know how can I do it.

(Apr 2, 2020 02:14 PM)webdev77 Wrote: [\[CITE\]](#) Here's a good experiment for you. Open up Audacity and generate a sinewave on the right channel and a cosine on the left channel. Picking 10kHz or so should work well. Now pick up your speakers and point them directly at one another. You will get destructive interference and hear almost nothing if you can perfectly line them up. Very cool stuff, I've seen a video on youtube. Btw, if I just want to use an RF transmitter to interfere, not an another speaker, is still be doable?

The problem is that at these very low frequencies, I really don't know how can I get a RF transmitter working on that frequencies.

SawCyanic - April 3, 2020, 7:07 am

(Apr 3, 2020 12:10 AM)allexj Wrote: [\[CITE\]](#) Have you an idea on how to transmit at that low frequencies? I know I can also use my soundcard and attach an antenna in headphone jack, but there's the antenna problem that need to be like kilometres of length lol, so really don't know how can I do it.

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Ever get a text message or a phone call and notice that your speakers made a weird noise? No other speakers were involved with that, so yes you can probably get a low frequency transmitter for Arduino and use a Raspberry Pi (or an Arduino like intended) to control it.

webdev77 - April 3, 2020, 8:30 am

(Apr 3, 2020 12:10 AM)allexj Wrote: [\[CITE\]](#) Very cool stuff, I've seen a video on youtube. Btw, if I just want to use an RF transmitter to interfere, not an another speaker, is still be doable?

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There are plenty of antennas that claim to be 10kHz to 30MHz and are small (the size of your arm or smaller). How well they actually work in VLF is sometimes suspect, but it should be fairly apparent what looks to be decent quality and what isn't.